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| EXAMINER | |
|---|---|
| NATNAEL, PAULOS M | |
| **ART UNIT** | **PAPER NUMBER** |
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Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/903,656 | Applicant(s) SEO ET AL. | |
|---|---|---|---|
| | Examiner Paulos M. Natnael | Art Unit 2614 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *2,3 and 5-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,3 and 5-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed "a remote control" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims **5-7** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim **5**, the claimed indication signal is new matter. If the applicant contends it is not new matter, specific location, i.e., page #, line # should be indicated.

In claim **7**, the claimed wherein said step of judging whether a transmission of an OSD is needed or not, includes sensing a user's input requesting a setting status or command to change a control parameter, is new matter which was not described in the specification. If the applicant contends it is not new matter, specific location, i.e., page #, line # should be indicated.

Claim **6** is rejected because it depends from a rejection claim 5.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims **2,3, 5-18** are rejected under 35 U.S.C. 102(e) as being anticipated by Admitted Prior Art (Admission), Fig.1 which is clearly labeled by Applicant as "Conventional Art".

Considering claim **2**, the admission discloses all claimed subject matter, note;

a) judging whether a transmission of an OSD is needed or not, is met by the controlling unit, 110 (fig.1), which determines whether an OSD information needs to be transmitted to the HDTV.

b) If so, determining whether, a volume of the OSD is larger than a certain volume, and if so transmitting the OSD through an analog connection, and if the volume is not larger than the certain volume, transmitting the OSD through a digital connection, is also met by the controlling unit 110 which decides the transmission path of the OSD by checking the volume of the OSD data, and sends a signal to OSD generating unit 130. (page 5)

Considering claim **3**, (Presently Amended) the method according to claim 2, wherein the digital AV contents are transmitted through the a digital connection while the OSD is transmitted through the analog connection, is also met by controlling unit 110 which transmits the digital contents through the digital connection while transmitting the OSD through the analog connection. (page 6)

Considering claim **5**, (New) the method according to claim 2, further comprising: transmitting an indication signal to indicate whether the OSD is being transmitted through the analog connection or the digital connection, is inherent because if the system is going to judge whether the OSD is being transmitted through either channel or connection, some sort of an indication signal would be appropriate to transmit so that the controlling unit of the system would execute the process properly.

Considering claim **6**, (New) the method according to claim 5, wherein the transmission of the digital AV contents, the OSD and the indication signal are from a signal output apparatus, is met by output device 100, fig.1;

a) receiving the AV contents, the OSD and the indication signal at a signal input apparatus, is met by signal input device 200, fig.1;

b) processing the indication signal at the signal input apparatus to switch between a first input terminal for the analog signal and a second input terminal for the digital AV content, is met by video processing unit 230 and controlling unit 210, fig.1;

Considering claim 7, (New) the method according to claim 2, wherein said step of judging whether a transmission of an OSD is needed or not, includes sensing a user's input requesting a setting status or command to change a control parameter, is inherent in television systems where a remote controller is used by a viewer to send commands to the STB and/or TV set and thereby the controller, usually a microprocessor, receives the input signal, processes it, and, in turn, activates the TV set or other devices by sending a command signal.

Considering claim 8, (New) the method according to claim 7, wherein the user's input is received via a remote control.

Regarding claim 8, see rejection of claim 7.

Considering claim **9**, (New) a system comprising a signal output apparatus including:

a) an audio/video (AV) data source for transmitting digital AV content;

b) an on screen display (OSD) generating unit for generating an OSD, is met by OSD generating unit 130, fig.1;

c) a first controlling unit for controlling operation conditions of said AV data source and said OSD generating unit, is met by the controlling unit 11, fig.1;

d) a digital transmission terminal connected to said AV data source, is met by the IEEE 1394 channel transmitting MPEG TS and other data, fig.1;

e) an analog transmission terminal, is met by the analog channel, fig.1;

f) wherein when said first controlling unit judges that an OSD is needed, said first controlling unit compares a size of the needed OSD to a preset size, and based upon the comparison, transmits the OSD over one of the digital transmission terminal or the analog transmission terminal, is met by the controlling unit 110, fig.1; (see page 4 and 5 discussion of admitted prior art fig.1)

Considering claim **10**, (New) the system according, to claim 9, wherein if the size of the OSD exceeds the preset size, the OSD is transmitted over the analog transmission terminal, is met by the disclosure on page 5 that "a controlling unit110 deciding whether

a transmission path of the OSD is an analog path or a digital path by checking the volume of OSD." (page 5)

Considering claim **11,** (New) The system according to claim 10, wherein the digital AV contents are transmitted over the digital transmission terminal at the same time that the OSD is transmitted over the analog transmission terminal, is inherent because the operation of the system is automatic.

Considering claim **12**, (New) the system according to claim 9, wherein if the size of the OSD does not exceed the preset size, the OSD is transmitted over the digital transmission terminal, is met by the judging circuit, i.e., controlling unit 110, fig.1;

Considering claim **13**, (New) The system according to claim 12, wherein the digital AV contents are transmitted over the digital transmission terminal at the same time that the OSD is transmitted over the digital transmission terminal, is inherent because the system transmits the digital video through the IEEE 1394 channel or connection whether or not OSD information is being transmitted.

Considering claim **14**, (New) The system according to claim 9, further comprising: a remote control, wherein said first controlling unit judges that an OSD is needed by sensing a user's input on said remote control;

Regarding claim 14, see rejection of claims 7 and 8.

Considering claim **15**, (New) The system according to claim 9, wherein said first controlling unit transmits an indication signal to indicate whether the OSD is being transmitted through the analog transmission terminal or the digital transmission terminal.

Regarding claim 15, see rejection of claim 7.

Considering claim **16**, (New) the system according to claim 15, wherein the indication signal is transmitted over the digital transmission terminal.

Regarding claim 16, see rejection of claim 7.

Considering claim **17**, (New) the system according to claim 15, further comprising:
a) a signal input apparatus physically separate from said signal output apparatus, said signal input apparatus including, is met by signal input 200, fig.1;
b) an MPEG decoder unit for connection to said digital transmission terminal, is met by MPEG decoder unit 220, fig.1;
c) a second controlling unit for connection to said first controlling unit, is met by controlling unit 210, fig.1;
d) a video processor connected to said MPEG decoder unit and said second controlling unit, wherein said second controlling unit receives the indication signal, is met by video processing unit 230, fig.1;

Considering claim **18**, (New) the system according to claim 17, wherein the second controlling unit controls said video processor to receive digital data from said MPEG decoder unit or analog data from said OSD generating unit of said signal output apparatus, is met by the controlling unit 210, fig.1;

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims **2,3,5-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shintani, U.S. Pat. No. 6,460,002.

Considering claim **2**, the claimed

a) judging whether a transmission of an OSD is needed or not, is met by the disclosure that "when OSD..Selection of the analog signal can be carried out by an auto-detect function built into the HDTV, such as a switching device 370, or by sensing the presence of the OSD information via a superimposed DC level on the chroma signal or in the digital transport stream". (col. 6, lines 11-18)

Except for;

b) If so, determining whether a volume of the OSD is larger than a certain volume, and if so transmitting the OSD through an analog connection, and if the volume is not larger than the certain volume, transmitting the OSD through a digital connection.

Regarding b), Shintani discloses, "In the case where the video and OSD signals are simply superposed, an inexpensive CMOS switch can be used if the signal bandwidth is not very large." (col. 5, lines 65 to col. 4, line 1) Here, Shintani discloses that if the signal bandwidth is not very large, a CMOS switch may be used to switch the data or superpose it onto the video signal. However, if the signal is too large, Shintani clearly implies or suggests that the OSD would be transmitted digitally. Because Shintani further teaches that "when the OSD information for the STB is needed, the HDTV switches the display input to the analog signal carrying the STB OSD information [channel 180]... In other embodiments, the OSD information for the STB is transmitted out of the STB [through the channel 160] along the digital transport stream, along with the HD digital data, via a high speed digital interface, such as IEEE1394." (col. 3, lines 18-27) Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Shintani by providing a digital channel when the OSD information may not be transmitted through the digital channel in order for the receiver to be able to receive both the digital video signal as well as OSD information, when the bandwidth or volume of the signal is too large for analog transmission.

Considering claim **3**, (Presently Amended) the method according to claim 2, wherein the digital AV contents are transmitted through a digital connection while the OSD is transmitted through the analog connection, is met by the digital path 160, fig.1;

Considering claim **5,** (New) the method according to claim 2, further comprising, transmitting an indication signal to indicate whether the OSD is being transmitted through the analog connection or the digital connection, is met by the disclosure that "auxiliary data in the digital transport stream can serve as the external trigger so that the TV receiver/monitor 120 can receive indication from the STB 100...(col. 6, lines 25-40)

Considering claim **6**, (New) the method according to claim 5, wherein the transmission of the digital AV contents, the OSD and the indication signal are from a signal output apparatus, said method further ccmprising:

a) receiving the AV contents, the OSD and the indication signal at a signal input apparatus, is met by the HDTV receiver 120, fig.1;

b) processing the indication signal at the signal input apparatus to switch between a first input terminal for the analog signal and a second input terminal for the digital AV content, is met by the CPU 350 (fig.3) which receives user input signals and processes them accordingly.

Considering claim **7**, (New) the method according to claim 2, wherein said step of judging whether a transmission of an OSD is needed or not, includes sensing a user's input requesting a setting status or command to change a control parameter, is met by the disclosure that When OSD information for the STB 100 is needed, the switching device 370 routes the analog signal at the analog input terminal 170 containing the STB OSD information to the CRT 380." (col. 6, lines 10-14)

Considering claim **8**, (New) the method according to claim 7, wherein the user's input is received via a remote control, is met by the disclosure that the "...A CPU 240 which may also be embedded within the transport unit 230 receives information from the user to which data streams are to be extracted for use." (col. 4, lines 46-49)

Considering claim **9**, (New) a system comprising a signal output apparatus including:

a) an audio/video (AV) data source for transmitting digital AV content, is met by the STB 100, fig.1;

b) an on screen display (OSD) generating unit for generating an OSD, is met by the CPU 240, Fig.2 (see also col. 4, lines 56-57)

c) a first controlling unit for controlling operation conditions of said AV data source and said OSD generating unit, is met by CPU 240, fig.2;

d) a digital transmission terminal connected to said AV data source, is met by digital terminal 160, fig.1;

e) an analog transmission terminal, is met by the analog channel 180, fig.1;

Except for;

f) wherein when said first controlling unit judges that an OSD is needed, said first controlling unit compares a size of the needed OSD to a preset size, and based upon the comparison, transmits the OSD over one of the digital transmission terminal or the analog transmission terminal;

Regarding f), see rejection of 2(b).

Considering claim **10**, (New) the system according, to claim 9, wherein if the size of the OSD exceeds the preset size, the OSD is transmitted over the analog transmission terminal, is met by the disclosure on page 5 that "a controlling unit110 deciding whether a transmission path of the OSD is an analog path or a digital path by checking the volume of OSD." (page 5)

Considering claim **11,** (New) The system according to claim 10, wherein the digital AV contents are transmitted over the digital transmission terminal at the same time that the OSD is transmitted over the analog transmission terminal, is met by the digital channel 160 and analog channel 180, fig.1;

Considering claim **12**, (New) The system according to claim 9, wherein if the size of the OSD does not exceeds the preset size, the OSD is transmitted over the digital transmission terminal;

Regarding claim 12, see rejection of claim 2(b).

Considering claim **13**, (New) The system according to claim 12, wherein the digital AV contents are transmitted over the digital transmission terminal at the same time that the OSD is transmitted over the digital transmission terminal, is implied because the system transmits the digital video through the IEEE 1394 channel or connection, whether or not OSD information is being transmitted.

Considering claim **14**, (New) The system according to claim 9, further comprising: a remote control, wherein said first controlling unit judges that an OSD is needed by sensing a user's input on said remote control;

See rejection of claim 8.

Considering claim **15**, (New) The system according to claim 9, wherein said first controlling unit transmits an indication signal to indicate whether the OSD is being transmitted through the analog transmission terminal or the digital transmission terminal.

See rejection of claim 7.

Considering claim **16**, (New) the system according to claim 15, wherein the indication signal is transmitted over the digital transmission terminal.

See rejection of claim 7.

Considering claim **17**, (New) the system according to claim 15, further comprising:

a) a signal input apparatus physically separate from said signal output apparatus, is met by 120, Fig.3; said signal input apparatus including:

b) an MPEG decoder unit for connection to said digital transmission terminal, is met by MPEG decoder unit 360, fig.3;

c) a second controlling unit for connection to said first controlling unit, is met by CPU 350, fig.3;

d) video processor connected to said MPEG decoder unit and said second controlling unit, wherein said second controlling unit receives the indication signal, is met by Transport 340, video switching 370, and the multi-image processor, fig.3;

Considering claim **18**, (New) the system according to claim 17, wherein the second controlling unit controls said video processor to receive digital data from said MPEG decoder unit or analog data from said OSD generating unit of said signal output apparatus, is met by Transport which receives digital signal through terminal 150, and multi-image processor which receives analog data through terminal 170, fig.3, both controlled by the CPU 350, fig.3;

***Response to Arguments***

8. Applicant's arguments with respect to claims 2 and 3 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (703) 305-0019. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PMN
April 12, 2004

PAULOS M. NATNAEL
PATENT EXAMINER